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REPRESENTING AND RE-DEFINING EXPERT KNOWLEDGE FOR THE LAYMAN Self-help medical manuals in late 19th century America*

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Abstract – This paper analyses a corpus (over 1 million words) of three self-help medical handbooks published in the US in the latter quarter of the 19th century, R.V. Pierce's *The People's Common Sense Medical Adviser* (1883), M.L. Byrn's *The Mystery of Medicine Explained* (1887), and *Gunn and Jordan's Newest Revised Physician* (1887). It aims to explore the discursive construction of medical knowledge and of the medical profession in the period, combining discourse analysis and corpus linguistics. The popularity of these manuals has to be seen within the context of medical care at a time when, in spite of the advances made in the course of the 19th century, the status of the medical profession was still unstable. Initially the focus of the study is on the representation of the medical profession. In this respect, the analysis testifies to an approach to traditional medical expertise which is essentially ambivalent, taking its distance from abstract medicine and quackery alike, while at the same time promoting a new approach based on different, more modern principles. The focus then shifts to the episteme of the medical science as represented in the works under investigation. The construction of selected epistemically relevant notions – *knowledge*, *theory/ies*, *experience*, *evidence*, and *observation* – is discussed relying on concordance lines in order to retrieve and examine all the contexts where they occur. The results of the analysis indicate a shift in the epistemological approach to knowledge, with theory and suppositions being complemented by experience, evidence and facts, and a representation of knowledge as a tool for empowerment, in line with the increasing democratisation of medicine characterising the period.

Keywords: medical knowledge; self-help medical handbooks; domestic medicine manuals; 19th century America; medical profession; democratisation of medicine.

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1. Introduction

The focus of this paper is on self-help medical handbooks circulating in late 19th century America, a genre that was very popular, at a time and in a context where healing was still largely domestic in nature (Risse 1977, p. 1).

The health reform movement that had gathered momentum in the early half of the century had brought about a shift in the basic attitudes towards health, sickness and death. As Markell Morantz points out (1977, p. 79), sickness was no more tolerated with the stoicism of the colonials, and the idea emerged that health could be improved and disease at least partly prevented through individual effort. This, of course, enlarged the scope and intent of popularising medical handbooks.

This paper analyses a corpus of domestic medicine manuals published in the US in the latter quarter of the 19th century, and aims to explore and define the idea of medical knowledge underlying them. Medical knowledge is intended here not merely as pertaining to the medical sciences *strictu sensu*, their principles and practices, but also as encompassing various kinds of ancillary knowledge that may be described as “health education” – e.g. information and tips about personal and mental hygiene, notions about a healthy and active lifestyle, sanitary instructions, etc. –, which was also included in the handbooks themselves (McClary 1986).

1.1. Background: medicine and doctors in late 19th century America

Smith (1992, p. 251) relies on Slack’s (1979) statistics to point out that in the United Kingdom the publication of vernacular medical works and regimens started as far back as in the late 15th century, but gathered momentum in the second half of the 18th century, a growth that became even more marked in the course of the 19th century. At first, in the US domestic medicine manuals were imported from Britain. Cases in point are John Wesley’s *Primitive Physick*¹ (1747) and William Buchan’s *Domestic Medicine* (1769). In particular, the latter was the first in its kind for its completeness, containing also suggestions for prevention, and was translated into all major European languages. It enjoyed great popularity also in America, where various editions were published, enlarged and “revised and adapted to the diseases and climate of the United States” (under the editorship of Samuel Powel Griffitts, as specified on the title page of the 1795 edition). It maintained its popularity throughout the 19th century, with its last US edition in 1913 (Risse 1992, p. 186n.), and was taken explicitly as a model by later authors writing similar manuals (see e.g.

¹ The title was spelled *Physick* in the earlier editions and was changed to *Physic* in the 20th edition in 1781.

Benezet 1826). For in the course of the century, in the US numerous domestic medicine manuals were written by practicing physicians, finding so much favour with the general public that they were reprinted in revised, updated and enlarged editions throughout the century and in some cases well into the 20th century.

The popularity of domestic medical manuals and health guides in 19th century USA has to be seen within the context of the situation of medical care at a time when the status of the medical profession was still unstable, especially in outlying rural areas where physicians were striving to establish the distinctive status it already enjoyed in Britain while lay healers practicing folk remedies were still very popular.

The lack of a solid reputation for the medical profession was partly due to the geographical characteristics of the country and the lack of a regulatory framework, notwithstanding the fact that since the late 18th century medical schools had started to be established (the first one in Philadelphia in 1765), medical societies founded (the Massachusetts Medical Society was incorporated in 1781) and exams for prospective doctors introduced in some States. Official recognition across the board, however, was still slow to come.

Another reason for the often doubtful prestige of the medical profession was that, although the 19th century saw dramatic advances and breakthroughs, with the gradual rise of the modern paradigm in medicine based on observation and experimentation (Furst 2000, pp. 4-5), in the early decades there was still a prevalence of traditional speculative medicine, based on abstractions (e.g. the theory of humours). Relying on this kind of “library” medicine, doctors were often uncertain and unsuccessful in their therapies, and this made it difficult for the layman to see in what respects they were better than quacks. For instance, the belief that diseases were caused by miasmas, and the lack of comprehension of contagion and sepsis often caused the catastrophic failure of many pharmacological and surgical therapies prescribed by physicians until late in the century (Furst 2000, p. 14). This undermined the reputation of the medical profession, which improved gradually as physicians became more knowledgeable and therefore better able to help their patients (Furst 2000, p. 16). In the meanwhile, until the second half of the century, in certain parts of the country it was admitted that anyone possessing some knowledge and/or some manual expertise (apothecaries, barbers, midwives, herbalists, clergymen, etc.; see Manger 2005, p. 301) could practice medicine. No wonder then that often people thought they could do without doctors, and opted for self-help, by “self-help” meaning “the diagnosis, care, and even prevention of disability and illness without direct professional medical assistance” (Risse 1977, p. 2).

According to Starr (1982), the tension between physicians’ quest for a privileged status and popular resistance to their authoritativeness and power reflected “the conflict between a democratic culture and a stratified society”

(1982, p. 31). American society was growing increasingly democratic and egalitarian also thanks to the enlargement of the franchise, the spread of public education and the popular press. With the rise of people's confidence in their own competences and expertise, and of distrust in medical approaches which were not consistently successful, a cultural climate developed which was ideally suited to the spread of self-help manuals. The political climate of the mid-nineteenth century encouraged a shift from an almost mystic approach to medicine to one based on "common sense": as Rutkow (2010, p. 45) points out, the "democratization of healing" – as she terms the shift – gathered momentum starting from "the ascent of President Andrew Jackson's populist embrace of the common man".² Indeed, "medical autonomy, non-interventionist care, and home doctoring were part of Jackson's call for self-determination in one's life" (Rutkow 2010, p. 45), and were also instrumental in fostering the rise of unorthodox, sectarian medicine, such as Thomsonianism (a botanically based movement),³ Grahamism (based on a vegetarian dietary regime), hydropathy, and homeopathy (see also Hoolihan 2001, p. XV, and Duffy 1993, pp. 81-94), etc. All these movements were part and parcel of the transition (Haller 1981) which American medicine underwent in the second half of the 19th century.

Within this context, Starr (1982, p. 32) identifies three main spheres where medicine was practiced: domestic medicine, professional medicine practiced by physicians, and folk medicine practiced by lay healers. Among these, homecare was certainly the most popular and took advantage of healthcare manuals: so much so that often the self-help medicine of the period is referred to as "domestic healing" or "kitchen medicine" (Risse 1977, p. 3).

As Hoolihan puts it, "it is hard to overestimate the influence of popular medical literature as an instrument of reform" (2001, p. XV). While such popular literature was sometimes looked down on by some members of the medical profession, who also saw it as a form of competition, it was not infrequent for it to include serious scholarly efforts. It is meaningful that the most popular of these publications were written by physicians, especially by enlightened doctors who committed themselves to popularising medical knowledge and educating the general public. In time this contributed to spreading a scientific culture of medicine and respect for the medical profession's authoritativeness.

2 Jackson's Presidency: 1829-1837.

3 The denomination "Thomsonianism" derived from the name of this sectarian movement's founder, Samuel Thomson, whose book (Thomson 1825) was the basis of his botanico-medical movement.

2. Study design: aim, scope and materials

Against this backdrop, this paper investigates a corpus comprising three domestic medicine handbooks published in the US in the 1880s: R.V. Pierce's *The People's Common Sense Medical Adviser*, 1883 (11th edition), Marcus Lafayette Byrn's *The Mystery of Medicine Explained*, 1887, and *Gunn and Jordan's Newest Revised Physician*, 1887, presented as the 214th edition of John Gunn's famous book *Gunn's Domestic Medicine* (1832), revised and enlarged by Johnson H. Jordan, Gunn having died in 1863.⁴

Pierce's and Byrn's manuals had been published for the first time relatively recently, the former originally in 1875 and the latter in 1869 (copyrighted in 1887), with further revised and improved editions published in the following years, while Gunn and Jordan's *Newest Revised Physician* was the result of a historical accumulation of texts, as explained in the Preface. The original core of the 1,260-page tome was Gunn's volume *Gunn's Domestic Medicine* (604 pages), first published in 1832, which in time had had several "new and improved editions". In 1857 it appeared in a new edition entitled *Gunn's New Domestic Physician, or, Home Book of Health: A Complete Guide for Families* (1,129 pages). *Gunn and Jordan's Newest Revised Physician* was a further revised, updated and enlarged edition, copyrighted in 1885, and was defined as "the second family work originating with Doctor John C. Gunn" (1887: v). It featured a new version of the original manual radically revised, updated and enlarged by Dr Johnson H. Jordan, with a number of additions ("Anatomy", "Physiology and the Laws of Health", "The Vegetable Materia Medica," "Medical Recipes", etc.). It also included some further minor additions ("separate treatises on Anatomy, Physiology, and the Laws of Health") by Charles Alfred Rodin, M.D., the German co-translator of Gunn's original volume.

The history, origin and evolution of each manual are interesting in their own rights, and may be fruitfully investigated in order to trace the evolution of their contents over the decades; however, such an investigation is beyond the scope of this research, which aims to sketch a picture of the status of self-help books designed for lay users in the late 19th century. The three handbooks were chosen on account of their popularity during the 1880s (and, for that, for a long time after), as we wanted to focus our analytical efforts on texts that may be as representative as possible of the materials circulating among laymen in America at the time, to which ordinary people were exposed to in their search for information, advice or prescriptions regarding health, diseases, remedies and tips for a healthy lifestyle. Of course, these very popular manuals

4 The fac-simile editions of the books were retrieved from the U.S. National Library of Medicine Digital Collection (<https://collections.nlm.nih.gov/>; accessed on 6 June 2017). To be analysed with computer routines, txt versions of the books were produced for machine readability.

contributed to constructing the idea of medicine and medical knowledge that prevailed in the period under examination.

Therefore, in this study special attention will be given to the function of these medical handbooks as instruments for the spread of medical knowledge among the lay population. Initially the focus will be on the representation of the medical profession; the focus will later shift to the episteme of the medical science as represented in the works under investigation, with special attention paid to the use of words connected with knowledge and its transmission and the discursive dynamics of which they are part.

Table 1 shows the details of the corpus:

	Gunn	Byrn	Pierce	Overall corpus
Number of words	616,021	210,498	322,325	1,148,914
Standardised TTR	42.12	43.78	45.09	43.26

Table 1
Corpus details.

As shown in Table 1, the corpus comprises more than a million words. The standardised TTR of the three texts ranges from 42.12 for Gunn to 45.09 for Pierce, averaging out at 43.26. Gunn's text appears to be the least lexically varied of the three – the larger size inevitably accounting for higher repetition rates of some lemmas.

The study takes a corpus based approach. This means that the bulk of the research is essentially qualitative, and computerised routines are relied on to calculate and compare the relative frequencies of selected lemmas across the three corpora and to retrieve contexts of usage, by making recourse respectively to the Wordlist and Concordance Tools of the Wordsmith Tools software suite (version 7; Scott, 2016). In other words, frequency data are not used to drive the investigation, but rather to corroborate hypotheses derived from close reading of representative parts of the texts, and in particular the introductions, and from contextual knowledge ensuing from an awareness of the socio-historical situatedness of the documents.

Because of the difference in the size of the various corpus components, wherever possible and appropriate frequency data are quoted in percentages. However, due to the low frequencies of some of the lemmas analyzed and the considerable differences in corpus size across the three corpora, normalisation of frequency data has often proved necessary, as suggested in various studies (see e.g. McEnery *et al.* 2006, pp. 52-53; McEnery and Hardie 2012, pp. 49-50). Data normalisation consists in calculating the frequencies that might be expected to be found in a corpus having the same characteristics as the one under investigation, but assuming its size to be an arbitrarily chosen number of words (typically 10,000, 100,000 or one million, depending on the original size of the corpus). Therefore, in the remainder of this essay in addition to

frequency percentages, normalised (or relative) frequencies (“nf”) are also given, setting the common base of normalization at 100,000 words. The formula used for the calculation is as follows:

$$nf = (\text{number of occurrences} \div \text{number of tokens in the corpus}) \times (\text{common base of normalisation} = 100,000).$$

The analysis has been conducted on a set of lexical items deemed to be useful for the investigation of the construction of knowledge and the representation of episteme in the handbooks considered, making use of concordance lines to discuss their function in context.

Underlying this approach is the assumption that discursive artifacts both reflect and contribute to creating the conditions for social change (Fairclough 1992), of which the rise and vast circulation of medical self-help books was both a cause and a symptom. It has been mentioned in the introduction that the shift from traditional medicine to new approaches involved first and foremost a move away from abstract deductive reasoning, based on a priori unproven theories, to inductive, empirical methods of fact-finding in which evidence plays a key role. An essential component of this empirical turn was also the intent to explain the “mysteries” of medicine to the common folk, to quote from Byrn.

In the remainder of this essay the three texts under investigation will be explored to verify whether evidence can be found in them of an explicit textualisation of the shift in approach highlighted above.

3. Representation of the medical profession and self-help manuals’ audience

As mentioned at the outset, all three manuals were written by medical doctors who took it upon themselves to instruct laypeople about the basics of healthcare. Representations of both authors and audiences are therefore embedded – explicitly or implicitly – in the texts of the manuals, and the exploration of such texts can help shed light on the ways in which both medical doctors and lay patients were constructed in the popularising medical discourse of the time. In particular, in respect of doctors, the ways in which they portrayed themselves as members of a disciplinary community, and the extent to which existing representations of medical professionals along the continuum from the quack to the scholar were drawn upon to establish their own professional and disciplinary identities (see Hyland 2012) may provide useful insights into the construction of the medical profession at the end of the 19th century.

In all the three handbooks analysed, the status of the authors as members of the medical profession is a crucial issue. On the front page of each volume,

in addition to the author's name and academic title, quite interestingly short supplementary details are given to highlight the writer's authoritativeness:

By M. Lafayette Byrn, M.D., Graduate of "The University of the City of New York," author of "Poisons in our Foods", etc, etc.

By R.V. Pierce, M.D., founder of the Invalids' Hotel, and President for the World's Dispensary Medical Association

In the case of the revised edition of Gunn's handbook, no addition is made to the name of the original author (John C. Gunn,), but the qualification of the additional author is specified in terms of expertise:

By J. H. Jordan, M. D., Physician to the Cincinnati Cholera Hospital in 1849.

In a similar vein, Byrn includes in his book a full transcript of his qualification as a M.D, explaining it as follows.

there are so many imposters in large cities—men pretending to be physicians and surgeons, and have never been properly qualified to act in such capacity, I have concluded to produce the evidence for the information and benefit of those who do not know me personally, of my Medical Education having been regularly completed in one of the first Medical Schools in America. (Byrn 1887, p. 124)

The theme of impostors passing themselves off as qualified physicians recurs also in the other manuals. See for instance Pierce's comment of the system of "fake" medicine:

I frequently receive letters making inquiries concerning the reputation or professional standing of a quack who resides in this city and makes a practice of imposing upon unfortunate sufferers. He assumes the title of "doctor" by virtue of a diploma obtained from a so-called medical university of Philadelphia, the charter of which has been revoked by the legislature of Pennsylvania, because the faculty of that institution were found guilty of selling diplomas to such charlatans. (Pierce 1883, p. 815)

The issue of the status of the medical profession and the competence of the books' authors as members of it are dealt with in the Introductions to the Manuals.

It is particularly meaningful that Dr. Gunn's Introduction published in the 1887 edition⁵ of the *Newest Revised Physician* is integrally centred on the discussion of the status of the medical profession and the practice of medicine,

⁵ This Introduction first appeared in the 1963 edition of *Gunn's Domestic Medicine*, just before his death. That this Introduction was maintained unamended in the 1887 edition, and not only for documentary purposes (the text is not dated), shows that it was considered to be still topical and authoritative in the 1880s.

putting forth a very complex and dialectic argumentation. The main point made in the different stages of the discussion is the desirability of “a general spread of suitable knowledge among the people”. Knowledge is presented as a form of empowerment, which, first of all, will defend individuals from “being made the easy prey of the villainous quack”. This stance taken against lay healers represented as charlatans is not matched by a corresponding defense of physicians. On the contrary, within the medical profession two groups of doctors are declared unreliable: “eminent physicians who quarrel with each other for pre-eminence in fame, instead of endeavoring to enlighten and advance the happiness of the human family” and those who “disgrace their profession by sustaining the dark shadows of ancient superstitions, instead of advocating the improvements of modern times”, and have “the rehearsal of former errors” as “the chief object of their works”. This bipartite group of inadequate doctors is “dissociated” from the body of good and reliable physicians who “are well informed in their business”, and possess “good judgement and common sense”, which are founded on truth and experience, the best results often deriving from “simple remedies, and good nursing”. Thus the rhetorical device of dissociation (Perelman, Olbrechts-Tyteca 1969, pp. 411ff.; van Rees 2007) is used to condemn some of the physicians, while avoiding the stigmatisation of the profession in its entirety.

In this respect, it is worth noticing that in the whole corpus the word *doctor(s)* has only 105 occurrences (just under 0.01%) although it is also used with a general meaning, which is often extended to refer to various kinds of healers (see below). This emerges clearly in the OED definition:

Doctor 6.a.

spec. A doctor of medicine; in popular current use, applied to any medical practitioner. Also: (amongst indigenous peoples) a traditional healer or diviner, esp. one dealing with afflictions thought to be caused by spirit possession or witchcraft. (“doctor, n.” OED Online. Oxford University Press, June 2017. Accessed 25 November 2017.)

Another word that is used in the corpus, but less frequently, to refer to doctors is *practitioner*, which occurs 69 times (including the plural); this is its definition in the OED:

Practitioner 1.a.

A person engaged in the practice of medicine; a physician, surgeon, pharmacist, etc. (“practitioner, n.” OED Online, Oxford University Press, June 2017, Accessed 25 November 2017.)

This is in contrast with the relatively high frequency of the word *physician(s)* which occurs 617 times (0.05%) and is by far the most frequent denomination for M.D.s in the corpus as a whole. This word more evidently refers to a qualified person who practices medicine, as in OED’s definition:

Physician 1.a.

a. A person who is trained and qualified to practice medicine; *esp.* one who practices medicine as opposed to surgery. (“physician, n.” OED Online, Oxford University Press, June 2017, accessed 25 November 2017.)

An examination of the concordance lines of the three words yields interesting indications as to their meaning and use at the time. It can be hypothesised that the word *doctor* is used sparingly because of its lack of a specific meaning: it appears in narratives of diseases and doctors, and to comment on doctors’ bills, but it is also sometimes utilised in general terms to refer to those healers that are not considered to be legitimately practicing the profession, i.e. the “Botanic(al) doctors”, the Uroscopian doctors who are described in a letter to the editor of the *Boston Medical and Surgical Journal* in 1845 as “a species of quack... who pretends to cure all diseases by examining the urine”,⁶ and also “Indian” doctors, whom Pierce (1883, p. 849) sees as “those having no knowledge of the delicate and intricate structure of the human system”. But the word “doctors” is never used in those passages where medical practitioners are represented as authoritative sources of medical knowledge, but rather in more general contexts:

you only the price of one visit from a Doctor. Save expense by getting the “Family Doctor	Byrn
o do before you think of sending for a Doctor. It will make you a good nurse, and tell you	Byrn
t to do yourself. Everybody can’t be a Doctor, but everbody can learn something about the	Byrn
unded with the illiterate “uroscopian” doctors, or fanatical enthusiasts, who ignorantly pret	Pierce
as favoring those itinerant self-styled doctors, or “professors,” who perambulate the count	Pierce
h are compounded by quacks, “Indian doctors,” or those having no knowledge of the delic	Pierce
together, to ask: “What shall he eat, Doctor?” “What can he eat?” “How often and when	Gunn
s the plant so much used by Botanical Doctors, called Thomsonians, supposed to have bee	Gunn
fashion, and late hours, the number of doctors, dentists, and apothecaries, and the amount	Gunn
ach. It has been justly said that, when doctors fail, the most simple remedies may effect a c	Gunn

Table 2

Selection of concordance lines for the lemma “doctor*”.

This is in contrast with the use of the lexeme *physician*, which also sometimes appears in stories about sickness and medical care, but is regularly used to talk about physicians as depositories of medical knowledge and experience, and as sources of knowledge.

at each case must be investigated by the physician and treated according to its cause. For	Byrn
age the aid of an experienced and skillful physician who will interpose the required treat	Byrn

⁶ The letter, entitled “Medical practice and diseases in the West”, was signed by A.B. Shipman, MD, Professor of Surgery in Laporte University, and published in the “Boston Medical and Surgical Journal” XXXII [7], 19 March 1845, p. 138.

d aether inhaled are used by surgeons and physicians, but are not safe in inexperienced ha	Byrn
pe of complete relief; but the experienced physician knows the treacherous symptom, and	Byrn
e Dr. Richard Bright, an eminent English physician, first recognized the affections and ma	Gunn
ions and careful watching of a competent physician can meet the necessities of such a case	Gunn
eneral terminated fatally. A distinguished physician of Moscow, in his report, states that dr	Gunn
and intemperance. Dr. Darbel, a French physician residing at Moscow, thinks that this at	Gunn
nts, or suffering from cold or exposure. A physician of Warsaw states in his report to the g	Gunn
is now admitted by the most experienced physicians in this disease, that this species of ul	Gunn
om its specific action upon serous tissues, physicians will readily understand how they can	Pierce
d not produce the desired result, a skillful physician's services should be secured, as he ma	Pierce
ections, often renders it difficult, even for physicians, to determine how far their treatment	Pierce
. This case had baffled the skill of several physicians, who regarded the disturbance of the	Pierce

Table 3
Selection of concordance lines for “physician”.

It emerges clearly that *physician* is the choice word to refer to the qualified and reliable medical professionals. It is used to represent the practitioner whose help is needed if one is to receive adequate treatment for serious or difficult to diagnose ailments, although criticisms are not spared, especially by Pierce (e.g. “it renders difficult, even for physicians to determine treatment shall be general and how far special”, “an error into which many physicians have fallen”: Pierce 1883, p. 497; etc.). But physicians are depicted as being the repositories of medical knowledge, whose views and opinions are to be relied on, so reference to their views counts as evidentiality. The opinions of eminent physicians, in many cases practicing in foreign countries (an eminent English physician, a physician of Moscow), are quoted as definitive sources of knowledge. It is noteworthy that among the collocates of *physician** there are (mostly in position L1) *skillful*, *competent*, *eminent*, *experienced*, *good*, *distinguished*.

In parallel, praise is repeatedly expressed for the ability of private individuals to contribute “information for the preservation of health and life of the most valuable character, solely derived from unstudied, or, at least, from unprofessional experience” (Gunn 1887, p. 7).

This position sanctioning the validity of lay experience, even when not supported by specialised study and professional training was already present in Buchan’s popular domestic medicine manual, imported from Britain in the previous century, where it was stated openly:

The knowledge of diseases does not depend so much upon scientific principles as many imagine. It is clearly the result of experience and observation.... Hence sensible nurses and other persons who wait upon the sick often know diseases better than those who have been bred to physic. (Buchan 3rd ed. 1769/1774, pp. 144)

Although Buchan himself assured that he did “not however mean to insinuate that a medical education is no use” (*ibidem*), his position was, as Lawrence (1975, p. 24) observes, “dangerously close” to extreme forms of anti-intellectualism, as well as a manifest “attack on an elitist status for the medical profession”.

Also in this respect, in the above mentioned Introduction Gunn follows in Buchan’s footsteps, when he asserts that medicine is not exclusively controlled by doctors, who do not have any monopoly:

I am not attached to monopolies of any kind, and less than any to that which confines to a particular order that information which teaches how to relieve sickness and pain, and defend people’s rights to apply their own remedies and to make recourse to physicians’ assistance on a principled basis. (Gunn 1887, p. viii)

It appears to me but fair to enlighten the people, as far as I can, on this important subject; for every one is interested in the prolongation of life and health, and should be, in a country like ours, allowed the privilege of thinking for himself, if he does not choose to act. (Gunn 1887, p. viii)

Thus, in spite of the progress that had been made in the course of the century, the diffidence towards professional medicine accompanied by a culture of self-help survived, although the stance taken by the author in this Introduction is probably influenced by old prejudices that younger practitioners had slowly been putting aside as the country moved on, but had not been completely eradicated.

In actual fact, the other two handbooks considered in this study do not deal with this issue in their Introduction, but – as will be seen – in other sections, as in the opening chapter they give preference to other aspects. The first one among such aspects is the theme of the democratisation of medicine. See the opening of Byrn’s *The Mystery of Medicine Explained*:

This book has been written for the “People!” the poor, the old, the young, male and female, the learned and the illiterate, those who are well and those who are sick; on land and on water, in the city and in the country, in the rural country-seat of the retired merchant or the log-cabin and camp-fire of the hardy pioneer or backwoodsman; for the clerk of sedentary habits, and for the farmer who toils in rain and in sunshine; for the young man far away from home, and for the mother who keeps watch over her loved ones through the long hours of dreary night in sickness;—in a word, for the million. (Byrn 1887, p. iii)

Not only does this opening convey a hyperbolic idea of the vastness of the potential audience of the book, but it also depicts it in terms of social variation, outlining an interesting picture of the American nation, including the well-to-do middle class but also pioneers and farmers – in a sort of thoreauvian picture of the group of intended addressees of the book.

The socially unlimited character of the potential audience for domestic medicine handbooks can also be found in the Prefaces to the other two works included in the corpus, but with a much lower profile. In the Dedication of Pierce's manual it is specified that the book is addressed to all of his patients, but the target audience seems to be even more all inclusive in geographical terms, virtually without boundaries

To my patients who have solicited my professional services from their homes, in every state, city, town, and almost every hamlet, within the American Union, also to those dwellings in Europe, Mexico, South America, the East and West Indies, and other foreign lands I respectfully dedicate this work.
(Pierce 1883, p. iii)

This obviously suggests that the author sees his book's potential audience as planetary, and at the same time implies that the writer's reputation as a physician is universal.

Strictly connected with this is in all three books the promise to use "simplest language, adapted expressly to the use of families" (Gunn 1887, p. viii), "information couched in language free from medical technicalities" (Byrn 1887, p. iii), with each author proposing "to express himself in plain and simplest language, and, so far as possible, avoid the employment of technical words" (Pierce 1883, p. vi). Such insistence on the use of plain language can be seen – at least in part – as indebted to the culture of accessibility and clarity in scientific writing originally introduced and promoted by the founding members of the Royal Society in the course of the 17th century (see, amongst others, Moessner 2009). However, the fact that all authors insist that a lay audience should be able to understand the handbook testifies to a strong democratising thrust which is much more comprehensive in nature and outlook.

A common denominator is the idea of knowledge as a form of empowerment. If, as seen above, the status of the medical profession is still to some extent questioned, all three authors assert the need for the layman to possess enough knowledge to "be enabled to give the best remedies, where a physician cannot be had, or, in cases of emergency, to know what to do before the physician arrives, so as to alleviate suffering or be the means of saving life." (Byrn 1887, p. iii). In the case of Pierce's book, the acquisition of knowledge is also seen as a form of empowerment to avoid problems deriving from inappropriate marriage (based on the Theory of Temperaments!) and to prevent "unfortunate young men and women" from having to suffer the consequence "of certain abuses, usually committed through ignorance" (Pierce 1883, p. vi), presumably venereal diseases and unwanted pregnancies.

Thus, access to knowledge is presented as one of the most effective tools to prevent and manage health problems and disease.

4. Defining medical knowledge: issues of access and co-construction

In light of the above, it is to be expected that the authors' presentation of their remedies and recommendations should not only be couched in accessible language, but also framed within a discourse of knowledge construction which, on the one hand, takes its distance from abstract medicine and quackery alike (see Section 1.1 above), and, on the other, promotes a new approach based on different principles. Indeed, the discursive construction of expert knowledge is central to the manuals, and its investigation can provide useful insights into the changing episteme of medical knowledge. In order to explore this topic, the construction of certain epistemically relevant notions is discussed, relying on concordance lines for the relevant words: *knowledge*, *theory/ies*, *experience*, *evidence*, and *observation*.

Attention is first addressed to the word *knowledge*. The linguistic representation of the notion it refers to is the main object of this discussion given that it can be seen as a superordinate of the other lexemes to be analysed, all of which fall within its overarching semantic area, so that the examination of the latter can be useful to further outline and specify what counts as knowledge in these popular medicine handbooks, and how such knowledge is textually constructed.

The lemma *knowledge* has noteworthy frequencies in Gunn's and Pierce's books, while it is far from frequent in Byrn's:

	overall	Gunn	Byrn	Pierce
knowledge	150 (0.01%)	78 (0.01%)	7 (<0.01%)	65 (0.02%)
normalised frequency	13.05	24.34	3.32	20.16

Table 4
Frequency of the lemma *knowledge*.

It can be noted that the frequency found is much lower in Byrn's book than in the other two. As will be seen, this is a constant element emerging from the analysis of all the different lemmas having epistemic significance, possibly indicating a less speculative attitude on the part of an author whose attention tends to be focused prevalently on practical and contingent aspects. But apart from quantitative divergences in the three authors' choices, within the corpus as a whole the notion of *knowledge* is generally presented as the guiding principle that makes it possible to understand material facts rationally, e.g.:

It is our knowledge of organic chemistry which is guiding us to a rational comprehension of the utility of food and the requirements of the organism.
(Gunn 1887, p. 34)

Conversely, lack of knowledge may have dramatic consequences:

From the lack of this knowledge on the part of parents, many a little one has perished before medical assistance could be obtained (Byrn 1887, p. 128)

That knowledge provides empowerment is not only a recurring theme in these manuals, but it is also stated openly in Pierce's manual:

"Knowledge is Power." That knowledge which is conducive to self-preservation is of primary importance. [...] Believing that the diffusion of knowledge for the prevention of disease is quite as noble a work as the alleviation of physical suffering by medical skill, I have devoted a large portion of this volume to the subjects of physiology and hygiene. (Pierce 1883, p. 388)

It is argued here that knowledge is most effective in preventing disease, presenting its dissemination not so much as a way to further intellectual progress, but as functional to its practical application. This somehow explains why in handbooks that purport to be aimed at self-help and practical applications there are so many parts that are entirely devoted to explaining scientific concepts. However, knowledge is never imparted as an end in itself or merely as a tool for intellectual improvement, but as a powerful instrument to educate the general public to preserve their health and help them to learn from experience, doing away with antiquated and ineffective forms of deductive reasoning based on abstract principles seldom anchored in experience and observation. Pierce states this clearly:

But knowledge is being diffused, education is lifting the masses, and dear-bought experience is opening the eyes of thousands, who now believe in hygiene and remedial restoration, rather than in the employment of debilitating, exhausting and disease-creating medicines. (Pierce 1883, p. 570)

This quotation from Pierce's book summarises very well the paradigm shift in the construction of knowledge from an idea of the medical science as based on abstractions and unquestioned conceptualisations to be applied by default, indiscriminately, to contingent cases, to one based on a more rigorous scientific approach. This change in perspective entails first a loosening of previous restrictions and prejudices towards laypeople's access to knowledge and, secondly, a broadening of the principles upon which such knowledge is co-constructed through different types of experience, including people's "common sense".

Among the lemmas referring to notions that are hypo-ordinates to *knowledge*, the first lemma to be discussed here is *theory* (in both its singular and plural form, *theor**), considering that traditional medicine is represented in the manuals as being essentially based on a priori speculations and theories (e.g. miasma theory). Quite interestingly, this lemma has a rather low

frequency in the corpus and only occurs in two of the three texts, being pointedly absent from Byrn's. Pierce seems to resort to the word *theory* the most, with almost twice as many occurrences as in Gunn's book, but in a text half the size, as highlighted by the normalised frequency figures.

	overall	Gunn	Byrn	Pierce
theor*	97 (<0.01%)	25 (<0.01%)	0	42 (<0.01%)
normalised frequency	17.08	4.05	0	13.03

Table 5
Frequency of the lemma *theor**.

While not numerically salient in themselves, occurrences of *theor** do appear to play a pivotal role, argumentatively, in the two handbooks in which the lemma occurs, as the examples below illustrate.

In most cases the word is used to mean “Abstract knowledge or principles, as opposed to practical experience or activity; theorising, theoretical speculation”, rather than “The conceptual basis of a subject or area of study (see OED Online 2017: “theory, n.”, 1 and 3); in other words, it tends to be used to refer to speculation rather than to establish scientific knowledge. See the following example from Gunn (1887):

Treatment of the Cattle Plague or Rinderpest. — 1. Vaccination. This has been recommended, on the theory that the Cattle Plague is analogous to or identical with Small-pox. Vaccination with the lymph of Cow-pock may then be resorted to as a prophylactic. It may be practiced on the udder or vulva of a cow. It has already been resorted to very extensively, but with doubtful success. (Gunn 1887, p. 40)

In some cases, ‘theories’ are contrasted with ‘facts of science’:

My object is to inculcate the facts of science rather than the theories of philosophy. (Pierce 1883, p. 8)

In the following example, commenting on the medical profession's resistance to new ideas, theories become worthy of respect only when they are proved by facts:

Thus has it ever defended its established opinions against innovation; yet, out of this very conservatism has grown much real good, for, although it has wasted no time or energy in the investigation of theories, it has accepted them when established as facts. In this manner it has added to its fund of knowledge only those truths which are of real and intrinsic value. (Pierce 1883, p. 294)

Sometimes, as in the example below, theory – in this case encoded by means of a verb form – is explicitly contrasted with practice, with the latter getting the upper hand:

Men may theorize finely, but at the bedside practice unsuccessfully: in preference to such persons, give me a good old woman, with her teas and pimples, and I will trust the rest to nature. (Gunn 1887, p. 25)

On the opposite end of the theory-empiricism scale are words such as *experience*, *evidence*, and *observation* which highlight the empirical, experimental and observational status of medical knowledge.

The next lemma to be analysed here is *experience*, which represents an important pole in the epistemic view presented in the manuals under discussion, as it embodies the tendency to leave abstractions behind and give preference to a more empirically based approach. The relevant frequencies are shown in Table 6.

	overall	Gunn	Byrn	Pierce
experience	185 (0.02%)	92 (0.01%)	14 (<0.01%)	79 (<0.01%)
normalised frequency	16.18	8.00	1.21	6.87

Table 6
Frequency of *experience* (noun).

If one compares these data with those in Table 4 regarding *knowledge*, it emerges that the overall frequency of the lemma *experience* is considerably lower than that of *knowledge*. This could lead to the hypothesis that *experience* occupies a lower epistemic status than *knowledge* in the texts at hand. However, as shall be seen, *experience* is one of the means through which knowledge can be obtained – others being, for example, *observation* and *evidence*. It would appear that *experience* is one of the means to obtain knowledge, though by no means the only one. It should be noted that also in this case Byrn's text features considerably lower frequencies than the other two authors, as it does for *knowledge* and *theor**, which would appear to support the hypothesis put forth above that in his book Byrn is less concerned than his colleagues with reflecting on the practical knowledge he imparts and on how it originated.

The collocates are also interesting, as in most cases they highlight the fact that experience is represented as one of the sources of knowledge which – if intense and repeated – is noteworthy and reliable, as the collocates of the word show. They are: *extensive* 5 hits (left), *large* 2 hits (18 left, 2 right), *long* 18 hits (16 left, 2 right), *proved* 12 hits (2 left, 10 right), *great* 11 (4 left, 7 right), all adjectives qualifying the kind of experience needed, and *observation* 9 hits (5 left, 4 right), a noun which often appears in the pattern “*experience and observation*”. This is because experience is occasionally represented in combination with observation and also with “unfettered intelligence”, as useful to prove or demonstrate certain facts and truths on the basis of which physicians can proceed to diagnose and treat diseases.

This is what emerges from a perusal of a selection of representative concordance lines for *experience** (noun):

ifficult to remove. It has been found by experience, that rubbing the child over with hog's l	Byrn
valuable guides they are at times, when experience, observation, etc., have given the powe	Byrn
the infant. Nature, therefore, as well as experience, indicates the propriety of with holding	Byrn
acquired only by attentive practice and experience, aided by previous anatomical knowled	Byrn
e, and Remedy. Strange as it may seem, experience has proved that, after great fatigue, the	Gunn
cessity for it whatever. Discoveries and experience of late years have amply demonstrate	Gunn
s, averted and cured diseases that bitter experience tells us have proved fatal for want of o	Gunn
urious. I have long been satisfied, from experience and observation, that much of the coug	Gunn
sunderstood. They speak the feelings of experience, of unfettered reason and observation,	Gunn
urated with chemical properties, which, experience has taught us, exercise a specific antise	Pierce
dropsy. The specialist, skilled by large experience in detecting the exact morbid condition	Pierce
country who have not, by observation or experience, become somewhat familiar with this	Pierce
may be forwarded to a specialist of large experience in this disease, who will readily deter	Pierce

Table 7
Selection of concordance lines for “experience”.

The importance of experience is confirmed by a further 156 occurrences of the cognate verb *to experience* and 40 hits for the relevant adjective (*experienced*).

Some examples of the use of *experience* and cognate words will be useful to illustrate the contexts where they are used, mostly with reference to physicians or other health professionals, explicitly or metaphorically: *competent and experienced physician* (Byrn), *skilled and experienced physician* (Pierce), *careful and experienced accoucher, or midwife, practical and experienced physician, steady and experienced hands* (Gunn).

In some cases, the command of a good record of experience is presented as one of the requisites of the reliable physician:

It is the imperative duty of every sufferer from this disease, no matter how seldom the unnatural losses occur, to engage the services of a competent and experienced physician (Byrn 1887, p. 258)

More often *experience* indicates a fact from which something is learnt, being followed by verbs like *to show*, *to confirm*, *to demonstrate*, e.g.:

Nurses, doubtless, are sometimes found to whom a child may be safely intrusted [sic]; but experience has but too often shown that the reverse is the case.
(Byrn 1887, p. 80)

This dose of Oil may seem large for a child of that age, but experience has confirmed the safety and great benefit derived in this complaint from large doses of Oil. (Gunn 1887, p. 226)

It has been found by experience, that rubbing the child over with hog's lard, until it becomes completely incorporated and mixed with this substance, and then making use of soft dry flannel to remove it, is the most simple, expeditious and perfect manner of getting rid of it. (Byrn 1887, p. 104)

Here *experience* is constructed as an essential source of knowledge, as it overrides common sense and principles, also offering a chance of serendipity in finding therapeutic solutions.

The analysis of the lemma *experience* and its partial overlap with or, more aptly, subordination to *knowledge* (in so far as experience leads to knowledge) discussed in the previous paragraphs confirms the heightened value placed on empirical sources of knowledge with respect to traditional approaches. This divergence takes the form – amongst other things – of a shift from an epistemological approach to knowledge based on *theory* to one grounded in *experience*, *evidence* and *observation*. The latter two are therefore the words whose use in the texts will now be considered.

The lemma *evidence* is very unevenly distributed across the three texts. As with *theor**, Gunn and Pierce feature it the most, while Byrn has the lowest number of occurrences.

	Overall	Gunn	Byrn	Pierce
evidence	116 (<0.01%)	44 (<0.01%)	12 (<0.01%)	50 (<0.01%)
normalised frequency	28.35	7.14	5.7	15.51

Table 8
Frequency of the lemma *evidence*.

Here again differences are noticeable between Gunn and Pierce on the one hand, and Byrn on the other.

In Gunn and Pierce *evidence* is used either to drive home the reliability of scientific claims made in the text, or to deny the reliability of commonly held beliefs:

Lightning, or electricity, obeys one unvarying law. It uniformly follows the best continuous conductor, and no conductor can be considered good unless it is continuous. Abundant evidence of this is afforded by the use of broken or otherwise defective lightning rods. (Gunn 1887, p. 1077)

There is no satisfactory evidence that the fruits and condiments brought to us from the tropics have any other than a pleasurable and beneficial effect, when used with reasonable caution and with a due regard to individual idiosyncrasies. (Gunn 1887, p. 781)

Tomatoes were formerly regarded as only fit for hogs, and their introduction to fashionable tables in this country in raw and stewed form is of very recent

date. Their value as medicinal food has probably been much overestimated, and is based chiefly, I think, on the same theory that has given Graham bread such great prominence, namely, that the value of any article of food is in pretty exact proportion to its disagreeableness, since, to the majority of persons, tomatoes are at first repulsive. There is no evidence that they are in any respect superior to ripe peaches, or pears, or apples. (Pierce 1883, p. 215)

In the latter example, Graham's theory (a popular one at the time of publication of the manual) is evoked only to be dismissed because of *lack* of evidence. Thus, *evidence* appears to be used to disprove wrong beliefs, as well as to put forth facts or scientifically reliable truths.

By contrast, examples of the use of *evidence* in Byrn's manual do not seem to fall along the same line as in the passages quoted above. Rather, Byrn hardly ever uses *evidence* to contrast it with previously held beliefs, but rather as an element emerging from observation that may be used as a starting point for trying a therapy, as can be seen in the following example:

The power of belladonna, in protecting individuals against the contagion of scarlet fever, has been much discussed. It has been used extensively, and with apparent success; at all events, the evidence is sufficient to make it worth a trial during the prevalence of a very severe or malignant form of scarlet fever. (Byrn 1887, p. 129)

The condition and appearance of the tongue, are indications almost always consulted by a physician in investigating a case of disease, and most valuable guides they are at times, when experience, observation, etc., have given the power of reading them aright. When the appearances of the tongue, however, are admitted as evidence, consideration must always be given to the natural state of the organ in the individual ... (Byrn 1887, p. 425)

Thus, while Byrn does occasionally use *evidence*, the discursive function of the term does not appear to be as salient, as it seems to be prevalently used as a synonym for 'realisation' with an essentially 'local' meaning, while in the other two texts the word is deployed in reasoning in the service of the epistemic evaluation of facts observed or data gathered.

In Gunn's and Pierce's books the programmatic use of *evidence* in aid of experimental and/or empirical science is emphasised by its attributive patterns. The lemma is typically accompanied by adjectives such as *conclusive*, *undisputable*, *positive*, *unmistakable*, *abundant*, *unequivocal* and *incontrovertible* in attributive position. The use of these accompanying adjectives reinforces the epistemic strength of the statements in which they occur.

en, bilious, sour, bloody or black matter, is evidence of disease of the brain, stomach, live	Byrn
nd with apparent success ; at all events, the evidence is sufficient to make it worth a trial d	Byrn
e to a river, that is thought to be conclusive evidence that he is not mad. But the truth is, th	Byrn
eatment. Still we have, after all, conclusive evidence to show that sensible changes and ext	Gunn

swallowed about that time, is unequivocal evidence of its importance to the digestive organ which is another pretty reliable corroborative evidence. There are various other evidences of and is often referred to as a most remarkable evidence of design on the part of the Creator. not to be accepted, however, as conclusive evidence of the existence of stone in the bladder. nsibilities sufficiently to give unmistakable evidence of his masculine attributes. One boy readers for here offering some indisputable evidence of the extraordinary success which I wonder to all who know me, and a positive evidence of your Superior skill and potent rem

Gunn
Gunn
Gunn
Pierce
Pierce
Pierce
Pierce

Table 9
Selection of concordance lines for *evidence*.

The consistent use of a premodifier to accompany *evidence* seems to imply that “evidence” in itself is not sufficiently meaningful to be taken into considerations, while it is its conclusive, positive, powerful, remarkable, satisfactory or real character that makes it meaningful. Similar comments apply to the lemma *observation*, which has frequencies that are very similar to those of *evidence*:

	Overall	Gunn	Byrn	Pierce
observation*	105 (>0.01%)	45	10	50 (0.01%)
normalised frequency	27.56	7.3	4.75	15.51

Table 10
Frequency of *observation**.

Also in the case of *observation*, there are slight differences in usage among the three authors, as emerges from a selection of the concordance lines:

g of an infant thus circumstanced. The same observations apply to infants, whose stomach g in any or every posture, are all matters for observation; also any habitual cough, and its c illness and oppression, which soon goes off. Observation and facts show, however, that the . Often there is a great deal of reason in the observation. Much of the bile secreted by the l ems to be acting vicariously. Only the close observations and careful watching of a compe ings of experience, of unfettered reason and observation, Which fully confirm that solemn yed cells. The intellect, whether engaged in observation, generalization or in recondite stu brain, but the others, as is clearly shown by observation and experiment, cannot be restrict hey had perforated the intestine; but careful observations have proved that they can only e ars, has been considerably reduced. Clinical observation proves that injuries to the lungs a

Byrn
Byrn
Gunn
Gunn
Gunn
Gunn
Pierce
Pierce
Pierce
Pierce

Table 11
Concordance lines for *observation*.

An examination of the concordance lines shows a difference between Gunn and Pierce on the one hand, and Byrn on the other. Gunn and Pierce tend to use this word to refer to the action of observing scientifically, often in combination with words like *experience* and *investigation*, and premodified by adjectives like *clinical*, *close*, and *careful*; Byrn, on the other hand, uses it less frequently, in half of the cases in the plural and more often with a

contingent meaning referring to rules or generalisations gathered from experience. See the following examples are given below:

But the cause can generally be ascertained by careful observation; then we can generally remove the symptom by removing the cause [...] (Gunn 1987, p. 320)

There is, perhaps, no subject more interesting or important for investigation and observation, than the Diseases of Children [...] (Gunn 1987, p. 589)

Clinical observation proves that injuries to the lungs are not so fatal as was once supposed. (Pierce 1883, p. 496)

It should be expected that such careful, or pains-taking experiments, as are necessary to establish a science, will be preceded by intuitive judgment and accredited observations, which may be, for a time, the substitutes of those more abstruse in detail. (Pierce 1883, p. 140)

In consequence of the deterioration of the mind which the disease occasions, development of the mental functions are sadly interfered with, capacity of acquirement is lessened, progress is arrested, and hence the frequent observation of the precocious youth becoming the dull adult. (Byrn 1887, p. 255)

While making these observations, however, it must not be presumed that we ignore the culture of the mind or of the taste (Byrn 1887, p. 493)

Although – as mentioned above – Byrn tends to use the word *observation* with a more contingent meaning, this does not diverge from an approach oriented towards empirical observation and the gathering of evidential proofs rather than to the application of abstract and unproven principles.

Overall, also the analysis of the usage of the lexeme *observation* confirms a conceptualisation that is part of a method leaving behind unproven theories based on abstractions in favour of an inductive, fact-based approach in the medical sciences, as explicitly asserted in Pierce's statement above (the fourth in the sequence of examples above), advocating that intuitive judgment and observation, followed by careful or painstaking experiments, may replace approaches that are "more abstruse in detail".

The analysis conducted identifies some common traits across the three textbooks, but also highlights some diverging trends. In particular, Gunn and Pierce appear to share a more speculative focus – though consistently within the boundaries of evidence-based medicine – whereby they constantly strive to instruct the general public on the basics of medical self-help, but also to foster forms of critical appraisal of medical knowledge. Byrn, on the other hand, seems to eschew all forms of speculation, preferring to target more practical aspects. His approach is one based on practical knowledge, with

little attention paid to sources of knowledge, and with the prevalent aim to provide practical advice to be relied upon in the absence of medical help.

5. Conclusions

The analysis conducted on three medical manuals written for the benefit of lay people suggests that the authors of these publications were very well aware of their books' usefulness in helping people prevent health problems and solve them when they arose, except for the most serious conditions. The introductions to the texts confirm that while an eminently practical intent was a key determinant of the rise of such publications, conventional medical expertise being often hard to come by especially in isolated areas, or under circumstances in which getting hold of a doctor was not expeditious (for example in outlying rural areas or wild parts of the country, or at sea), a polemical intent was also prominent, with dissatisfaction with the approach of traditional medicine playing an important role in the framing of medical knowledge.

The texts testify to an ambivalent approach to traditional medical expertise: while doctors are still represented as playing a key role in the transmission of medical knowledge, a distinction is drawn between good and bad doctors, the latter being depicted either as incompetent charlatans or – at the other extreme – as physicians possessing a purely theoretical expertise, based on more or less traditional or sectarian unproven principles, capable only of giving advice that does not pass the test of empirical evidence.

The texts also testify to a shift in the epistemological approach to knowledge, with theory and suppositions being complemented and supported by experience, evidence, and observed facts. In this respect, two of the texts – Gunn's and Pierce's – appear to be more polemical in outlook, with theory being mentioned in mostly derogatory terms and frequently contrasted with factual evidence. This seems to be a remainder of the anti-intellectualism and empiricism about the medical profession prevailing in the previous century, which was hard dying in spite of the great progress of the medical sciences in the 19th century. In the case of Gunn's book this may be due to its being based on a work originally written in 1832, in spite of the radical revisions, updates, enlargements and additions made in the following decades, but it is certainly first-hand in the case of Pierce's volume which first appeared in the early 1880s. The same stance also features in Byrn's book, but the contrast with theory is not topicalised as it is in the other two texts, as this manual tends to be more exclusively practical in approach, with limited scope for reflection.

It is interesting that, in spite of the emphasis placed on experience and evidence, all three handbooks devote entire and lengthy chapters to imparting

their readers general knowledge not only of the functioning of the human body, but also of more general topics in Anatomy, Physiology, Botany, Domestic and Sanitary Economy, Emotions, and Life and Morals.

The significance of this comprehensive approach becomes clear if one considers that a common denominator of the manuals is the representation of knowledge as a tool for empowerment, in line with the increasing democratisation of medicine characterising the period, also praising lay common sense for providing useful insights which occasionally contradict, but more often supplement medical knowledge. This suggests an important step towards the co-construction of knowledge between expert and layman – a crucial aspect of the democratisation of science.

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⁷ The manuals included in the corpus are marked with an asterisk.